## **HYDROLOGY STUDY** – ESTES PARK, CO

### UNDERSTANDING CHANGES IN WATER FLOW

#### WHAT IS A HYDROLOGY STUDY?

A hydrology study tells us about the characteristics of water flows in streams within a study area. The analysis is based on watershed and floodplain conditions and determines the volume of water passing through a waterway during a given event. The ongoing Estes Park study will establish flood flow levels for the Big Thompson River, Black Canyon Creek, Dry Gulch, and Fall River watersheds. A hydrology study of Fish Creek was completed separately as part of the infrastructure repair project.



The safety of our entire community is paramount to maintaining our way of life, and the most effective way to continue building our vibrant community is to first understand the risks we face. This study will enable us to understand those risks and will inform our future planning and decisions.

The previous hydrology study was completed in 1977. Its conclusions, which were used to create the Town's current floodplain maps and inform building requirements, no longer accurately reflect the flood hazards. Since 1977, technology has greatly improved and more than 30 years of additional stream gauge and other data are available to inform the new study. In addition, the 2013 flood changed our area waterways and the flow of water. To learn more about the latest hydrology study, visit <a href="Estes.org/FloodMitigation">Estes.org/FloodMitigation</a>.



Estes Park watershed.



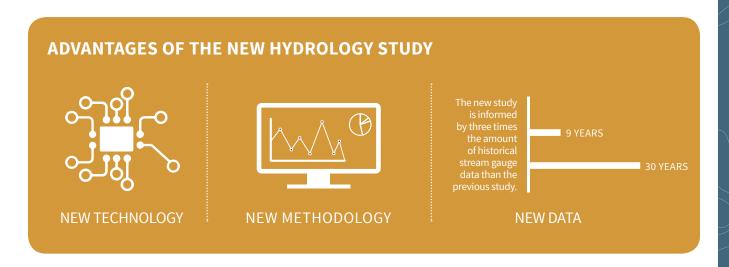
2013 flood changed area waterways and the flow of water.

# WHAT WILL THE RESULTS MEAN FOR RESIDENTS, BUSINESSES, AND PROPERTY OWNERS IN ESTES PARK?

The updated information presents a more accurate depiction of total water flow during a flood event and, with further study, each individual's flood risk. This means that a greater number of properties may be shown in high-risk areas (known as Special Flood Hazard Areas, or SFHAs) on the new flood maps. Final floodplain boundary maps for the Estes Valley will be available by spring 2017.

#### WHY ARE THE RESULTS OF THE NEW STUDY SO DIFFERENT FROM THE OLD ONE?

The initial study greatly underreported the stream flows. We now have more advanced methodologies, technology, and data to work with (including more than 30 years of additional stream gauge data), which result in a study that more accurately reflects current stream and river flows. The new study determined there are higher flows in some areas.



#### **HOW CAN I USE THIS NEW INFORMATION?**

This new flood hazard information will help inform the forthcoming flood maps, which will help you better understand and reduce your current flood risk. Additionally, it will be used in community planning and design efforts, including remapping floodplains, flood hazard mitigation, and projects to improve community resiliency.



**Know your risk:** Knowing the risk to our community's homes and businesses and taking actions to limit the disruption caused by a future flood event will save time and money in the long run. Use the information from the new maps to better understand your risk.



**Reduce your risk:** With a better understanding of your flood risk, you can work with the Town's floodplain administrator (<u>Estes.org/Floodplains</u>) to identify ways to reduce it. If you are in a high-risk zone (labeled with letters beginning with "A" on the new *preliminary* state flood map), you might consider elevating your property, installing approved flood vents, or partially filling in enclosures. These actions could reduce your risk and flood insurance premiums.



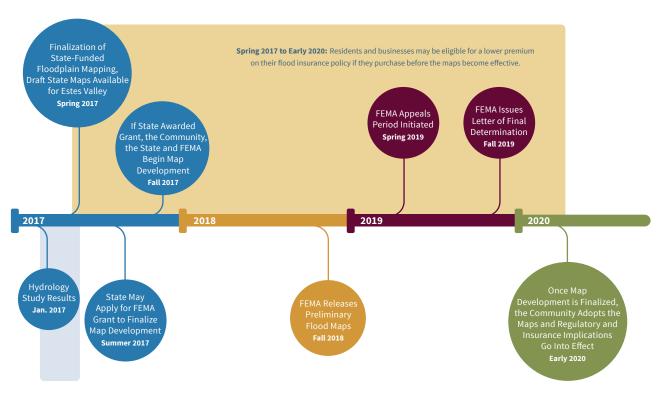
Insure your risk: With the results of the hydrology study comes an opportunity to invest in the safety and economic prosperity of the community. Flood damage is typically not covered under a standard homeowner's insurance policy. But since the Town participates in the National Flood Insurance Program (NFIP), anyone can buy flood insurance. The NFIP's grandfathering rule allows you to lock in the lower insurance rates associated with moderate- or low-risk flood areas before your property is determined to be within a high-risk area. An insurance agent will then continue to use the lower risk flood zone for future rating. To take advantage of these lower premiums, property owners must purchase flood insurance prior to the new flood map becoming effective (expected in 2020). For more information about flood insurance or to find an agent, please visit Floodsmart.gov.

#### **WHAT'S NEXT?**

The results of the hydrology study mark the beginning of a dialogue about ways we can work together to make our community safer and stronger. Once we have a better idea of the risks we face, we can begin identifying resources and projects that help protect our residents and businesses. This new information will also help the Town regulate activities in the floodplain to increase public safety. In addition, the results will provide data that the state of Colorado can use for future floodplain updates.

The timeline graphic below shows the anticipated sequence of actions as the Town works with our state and federal partners through the new mapping process. The process is estimated to run through the next four years until FEMA issues the <u>letter of final determination</u>, which will inform the community of the effective date of the updated Flood Insurance Rate Map (FIRM) and requirements of the community to remain participants in good standing in the NFIP. Ultimately, working with our partners and making good use of this new, crucial information will help Estes Park become a safer and more resilient community.

#### NEW HYDROLOGY AND MAPPING EVENTS TIMELINE



**Jan. 2017 to Spring 2017:** Residents and businesses can use the new information to begin identifying potential flood risk mitigation projects and actions to make the Town safer. FEMA can use these findings to determine potential opportunities for projects to qualify for federal funding or support resources.

The timeline depicts the expected sequence of actions associated with hydrology and new mapping, in coordination with the state of Colorado and FEMA. Times and events are subject to change.

